**IN THE CLAIMS:**

Cancel claims 17-19 as follows:

1.(Previously Presented) An adaptive signal weighting system including a signal path for transmitting an information signal of a predetermined bandwidth through said system, said system comprising:

- filter means disposed in said signal path for varying a gain impressed on a portion of said information signal within a first select spectral region within said predetermined bandwidth by a first variable gain factor to provide a filtered signal, said first variable gain factor varying in response to and as a function of a first control signal;
- means, responsive to said information signal, for generating said first control signal in accordance with a frequency value wherein approximately one-half of the energy of said information signal is below said frequency value;
- gain control means disposed in said signal path and responsive to said filtered signal for varying signal gain impressed on said filtered signal substantially throughout said predetermined bandwidth by a second variable gain factor to provide an output signal, said second variable gain factor varying in response to and as a function of a second control signal; and
- means for generating said second control signal in response to and as a function of signal energy of said information signal substantially within a second select spectral region within said predetermined bandwidth.

2.(Previously Presented) A system according to claim 1 wherein said means for generating said second control signal comprises means for detecting signal energy of said information signal below about 5 KHz.

3.(Previously Presented) A system according to claim 1, wherein said filter means comprises means for varying the first variable gain factor impressed on said portion of said information signal so that said first variable gain factor varies from amplification for signals having relatively high energy within said second select spectral region to attenuation for signals having relatively low energy within said second select spectral region.

4.(Previously Presented) A system according to claim 1, wherein said filter means comprises frequency discrimination means for detecting said portion of said information signal within said first select spectral region and for generating a frequency discrimination output signal representative of said portion, and second gain control means coupled to said frequency discrimination means for varying the gain impressed on said frequency discrimination output signal in response to and as a function of said first control signal.

5.(Original) A system according to claim 4, wherein said frequency discrimination means senses signal energy of said information signal above about 800 Hz.

6.(Previously Presented) A system according to claim 5, wherein said means for generating said first control signal comprises means for notch filtering and sensing the one-half energy frequency value of said information signal.

7.(Previously Presented) A system according to claim 1, wherein said means for generating said first control signal comprises first detection means for detecting the frequency value wherein about half of the signal energy of said information signal is below said frequency value.

8.(Previously Presented) A system according to claim 7, wherein said first detection means comprises

a variable notch filter that receives and filters said information signal and provides a notch filtered signal value, wherein said notch filter includes a notch set as a function of said first control signal;

a mixer that receives and mixes said notch filtered signal value and a value indicative of said information signal, and provides a mixed signal indicative thereof; and

an integrator, that integrates said mixed signal, to provide said first control signal.

9.(Previously Presented) A system according to claim 1, wherein said filter means comprises means for varying the first variable gain factor impressed on said portion of said information signal so that said first variable gain factor varies from attenuation for signals having relatively high energy levels within said second select spectral region to amplification of low energy signals having relatively low energy levels within said second select spectral region.

10.( Previously Presented) An adaptive signal weighting system including a signal path for transmitting an information signal of a predetermined bandwidth through said system, said system comprising:

- filter means disposed in said signal path for varying a gain impressed on a portion of said information signal within a first select spectral region within said predetermined bandwidth by a first variable gain factor to provide a filtered signal, said first variable gain factor varying in response to and as a function of a first control signal;

- a frequency detection circuit that determines a frequency value wherein approximately one-half of the energy of said information signal is below said frequency value, and generates said first control signal in response to and in accordance with said frequency value wherein approximately one-half of the energy of said information signal is below said frequency value;
- gain control means disposed in said signal path and coupled to said filter means for varying signal gain impressed on said information signal substantially throughout said predetermined bandwidth by a second variable gain factor to provide an output signal, said second variable gain factor varying in response to and as a function of a second control signal; and
- means for generating said second control signal in response to and as a function of signal energy of said information signal substantially within a second select spectral region within said predetermined bandwidth.

11.(Previously Presented) A system for decoding an encoded information signal of a predetermined bandwidth previously encoded so that said encoded information signal can be recorded on or transmitted through a dynamically-limited, frequency dependent channel having a dynamically-limited narrower portion in a first spectral region than in at least one other spectral region of said predetermined bandwidth, said system comprising:

- input means for receiving said encoded information signal;
- a signal transmission path coupled to said input means and responsive to said encoded information signal;
- output means coupled to said signal transmission path for providing a decoded information signal;

- gain control means disposed in said signal transmission path for varying a first signal gain impressed on said encoded information signal substantially throughout said predetermined bandwidth to provide a gain compensated signal, said first signal gain varying in response to and as a function of a first control signal;
- filter means for generating a filtered information signal disposed in said signal transmission path and coupled to said gain control means for impressing a second variable gain on a portion of said gain compensated signal substantially within said first spectral region so as to deemphasize said portion with respect to a remaining portion of said gain controlled information signal, said second variable gain varying in response to and as a function of a second control signal;
- means for generating said first control signal in response to and as a function of signal energy within a second spectral region of said filtered information signal; and
- means for generating said second control signal in accordance with a frequency value wherein approximately one-half of the energy of said filtered information signal is below said frequency value.

12.(Previously Presented) A system according to claim 11, wherein said means for generating said second control signal comprises

a variable notch filter that receives and filters said filtered information signal and provides a notch filtered signal value, wherein said notch filter includes a notch set as a function of said first control signal;

a mixer that receives and mixes said notch filtered signal value and a value indicative of said information signal, and provides a mixed signal indicative thereof; and

an integrator, that integrates said mixed signal, to provide said second control signal.

13.(Previously Presented) A system according to claim 11, wherein said means for generating said second control signal comprises

a low pass filter that filters said filtered information signal to provide a first filtered signal;

an amplifier that receives and amplifies said first filtered signal and provides a first amplified signal;

a first absolute value detector that receives said first amplified signal and provides a first absolute signal indicative thereof;

a second absolute value detector that receives said filtered information signal and provides a second absolute signal indicative thereof;

a comparator that compares said first absolute signal and said second absolute signal and provides a control signal; and

means, responsive to said control signal, for generating said second control signal.

14.(Previously Presented) A system according to claim 11, wherein said means for generating said first control signal comprises first detection means for detecting said signal energy of said filtered information signal within said second spectral region that includes about one-half of the energy of said filtered information signal.

15.(Previously Presented) A system according to claim 14, wherein said first detection means comprises means for generating a D.C. signal as a function of detected signal energy.

16.(Previously Presented) A system according to claim 15, wherein said means for generating a D.C. signal comprises a root mean square (RMS) detector.

17.(Cancelled)

18.(Cancelled)

19.(Cancelled)